USGS

# WATER RESOURCES RESEARCH GRANT PROPOSAL

**Project ID:** 2003TX91B

**Title:** Adsorption, Desorption, and Stabilization Behavior of Arsenic on Al3+-substituted Fe3+-Hydrous Oxides

**Project Type:** Research

**Focus Categories:** Water Quality, Treatment, Geochemical Processes

**Keywords:** adsorption, desorption arsenic

**Start Date:** 03/01/2003

**End Date:** 02/28/2004

**Federal Funds Requested:** $4182.00

**Matching Funds:** $33459.00

**Congressional District:** 5

**Principal Investigators:** Masue, Yoko; Loeppert, Richard H.

**Abstract:** Aluminum and ferrous oxides are now commonly used as adsorption agents in water treatment systems. This study hypothesizes that the relationship between Aluminum substituted ferrous oxides and arsenic could lead to improved methods to treat and dispose of arsenic pollutants. Objectives of this study are to examine the use ferrous and aluminum mixed oxides in water treatment as well as the stabilization of residuals. Various ions and ionic strengths will be evaluated and the flocculation that results from the use of mixed ferrous and aluminum oxides will be assessed.

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